

## **PHYSICIAN ALERT    WEST NILE VIRUS    PHYSICIAN ALERT**

The Department of Health (DOH) continues to emphasize the importance of active surveillance for human cases of West Nile Virus (WNV). Fax case report forms to (202) 442-8060.

**For information on laboratory testing for WNV call (202) 535-2323.**

**For clinical questions about WNV, please call (202) 442-5842.**

### **Reporting suspected cases of West Nile Virus (WNV) neuroinvasive disease**

To monitor for WNV infection, the Department of Health (DOH) is offering laboratory testing for WNV and other arboviruses in persons hospitalized with neuroinvasive disease, such as, encephalitis, meningoencephalitis, or aseptic meningitis, in that order or priority. Despite the publicity about WNV, there are many other, more likely causes of encephalitis and aseptic meningitis. In the late summer and early fall, enteroviruses should be considered, particularly in patients 16 years of age or younger. Other causes of encephalitis include herpes simplex (HSV), varicella zoster (VZV) and post smallpox vaccination. All confirmed positive IgM and IgG results from commercial laboratories must be reported immediately to DOH at (202) 535-2323 and be confirmed by DC Public Health Laboratory (PHL).

### **Case Definition**

**Clinical Description:** Arboviral infections may be asymptomatic or may result in illnesses of variable severity sometimes associated with central nervous system (CNS). Clinical syndrome can range from febrile headache to aseptic meningitis to encephalitis. Arboviral meningitis is characterized by fever, headache, stiff neck and pleocytosis. Arboviral encephalitis is characterized by fever, headache and altered mental status ranging from confusion to coma with or without signs of brain dysfunction.

**Case Classification: Probable** – an encephalitis or meningitis case, with the supportive serology, occurring during a period when arboviral transmissions is likely: 1) a single or stable (less than or equal to twofold change) but elevated titer of virus-specific serum antibodies; **or** 2) serum IgM antibodies detected by antibody-capture EIA but with no available results of a confirmatory test for virus specific serum IgG antibodies in same or later specimen. **Confirmed-** an encephalitis or meningitis case that is laboratory confirmed.

### **Testing for West Nile Virus (WNV)**

Please submit > 5.0 ml of serum (or plasma for virus isolation) and > 1.0ml of CSF. Please do not submit whole blood. Convalescent specimens (2 weeks after initial specimen) should be clearly labeled as such so appropriate testing can be done. A copy of the case report must accompany each specimen/set of specimens submitted for testing.

### **Mild Illness**

DOH does not recommend WNV testing for persons in whom there is low index of suspicion for WNV infection. Testing for WNV is not available at the DOH Public Health Lab for persons suspected of having WNV infection on the basis of mild illness, such as fever or headache, and recent mosquito bites. Rather than testing these persons, they should be advised to seek medical attention if more severe symptoms develop such as confusion, severe muscle weakness, lethargy, severe headache, stiff neck or photophobia.

### **Guidelines for specimen collection and submission for each type of test:**

The viremic phase of a WNV infection in humans is generally of short duration, with low detectable virus titers. Therefore, virus isolation and/or testing by PCR is only conducted on CSF or plasma collected within five days of illness onset, or on postmortem specimens. CSF samples are also to be forwarded for serological testing if sufficient volume remains. After five days, serological testing of serum or CSF is appropriate. The table below summarizes the guidelines for specimen collection and submission by type of test.

### **Test results**

Negative results will be available 3-5 days after receiving the specimens and completed case report form. Positive results will require confirmatory testing and will take longer.

**Please call (202) 535-2323 to provide the patient information needed to process specimens and for further specimen collection instructions. DOH staff will make arrangements for transporting specimens at that time.**

| Type of test                                 | Specimen  | Timing in relation to onset of illness                              | Transport  |
|--|---|---|--|
| IgM capture ELISA (WNV, EEE, Wee, SLE, CE)   | Serum   | Within 22 days  | Keep refrigerated and transport on wet ice                                 |
| Paired IgG serology (WNV, EEE, Wee, SLE, CE) | Serum   | Acute: within 14 days<br>Convalescent: 2-3 wks after acute specimen |  |
| Virus isolation and TaqMan TR-PCR for WNV    | Plasma (separate from whole blood within 2 hrs of collection) | Within 5 days   | Freeze at -70° within 2 hrs of collection and transport frozen on dry ice. |
|  | CSF   | Within 5 days   |  |
|  | Post mortem specimens (brain stem tissue or CSF)              | When obtainable   |  |

For additional information please see the DC Department of Health's Website at [www.dchealth.dc.gov](http://www.dchealth.dc.gov)